

IIT Faculty Name: Prof. Santiram Chatterjee

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IIT: IIT Bombay

Department: Civil

Semester: 3rd and 4th Semester

Course name: Geotechnical Engineering

Topic name: Shear strength of soils

Outline: * Factors affecting shear strength of soil

* Mohr-Coulomb failure criterion

* Frequently used laboratory tests to measure soil shear strength parameters

* Concept of critical state

* Stress-strain behavior, volume change and shearing of soils in drained loading condition

* Undrained shear strength

* Stress paths for different loading conditions

Prerequisites:

* Basic Engineering Mechanics

* Effective Stress Principle

* Consolidation